

Claims

1. A method of processing a glass substrate comprising the steps of: injecting gallium ions into a region of a glass substrate to be processed using a focused ion beam apparatus; and soaking the glass substrate in an alkaline solution so that portions impregnated with gallium ions are removed by dissolving in a localized manner.

2. The method of processing a glass substrate of claim 1, wherein processing depth is regulated by changing either of focused ion beam energy or substrate erosion time.

3. The method of processing a glass substrate of claim 1, wherein etching rate is regulated by changing either of the temperature or concentration of the alkaline solution.

4. The method of processing a glass substrate of claim 2, wherein etching rate is regulated by changing either of the temperature or concentration of the alkaline solution.

5. A method of processing a glass substrate comprising the steps of: irradiating gallium ions into a region of a glass substrate to be processed using a focused ion beam apparatus, performing dry etching and performing ion injection; and soaking the glass substrate in an alkaline solution so that portions impregnated with gallium ions are removed by dissolving in a localized manner.

6. The method of processing a glass substrate of claims 1, wherein the glass substrate is a Levenson mask substrate, and the portion to be processed is a half-wavelength-deep defect remaining after digging of a trench.

7. The method of processing a glass substrate of claim 5, wherein the glass substrate is a Levenson mask substrate, and the portion to be processed is a half-wavelength-deep defect remaining after digging of a trench.

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